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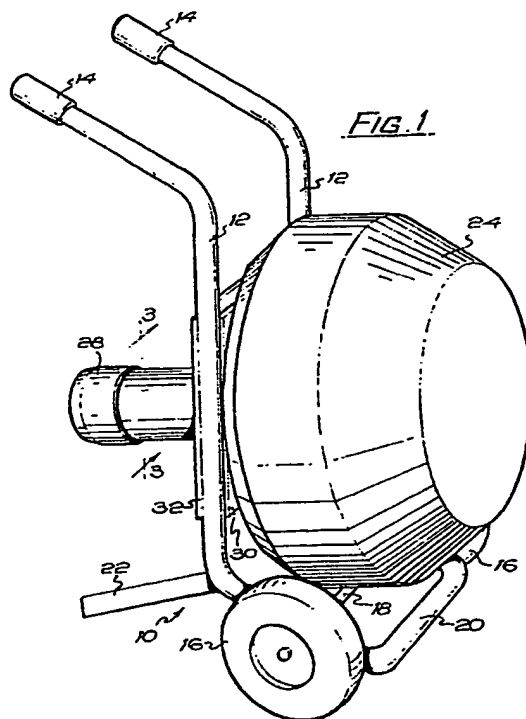
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(54) **Cement mixer**

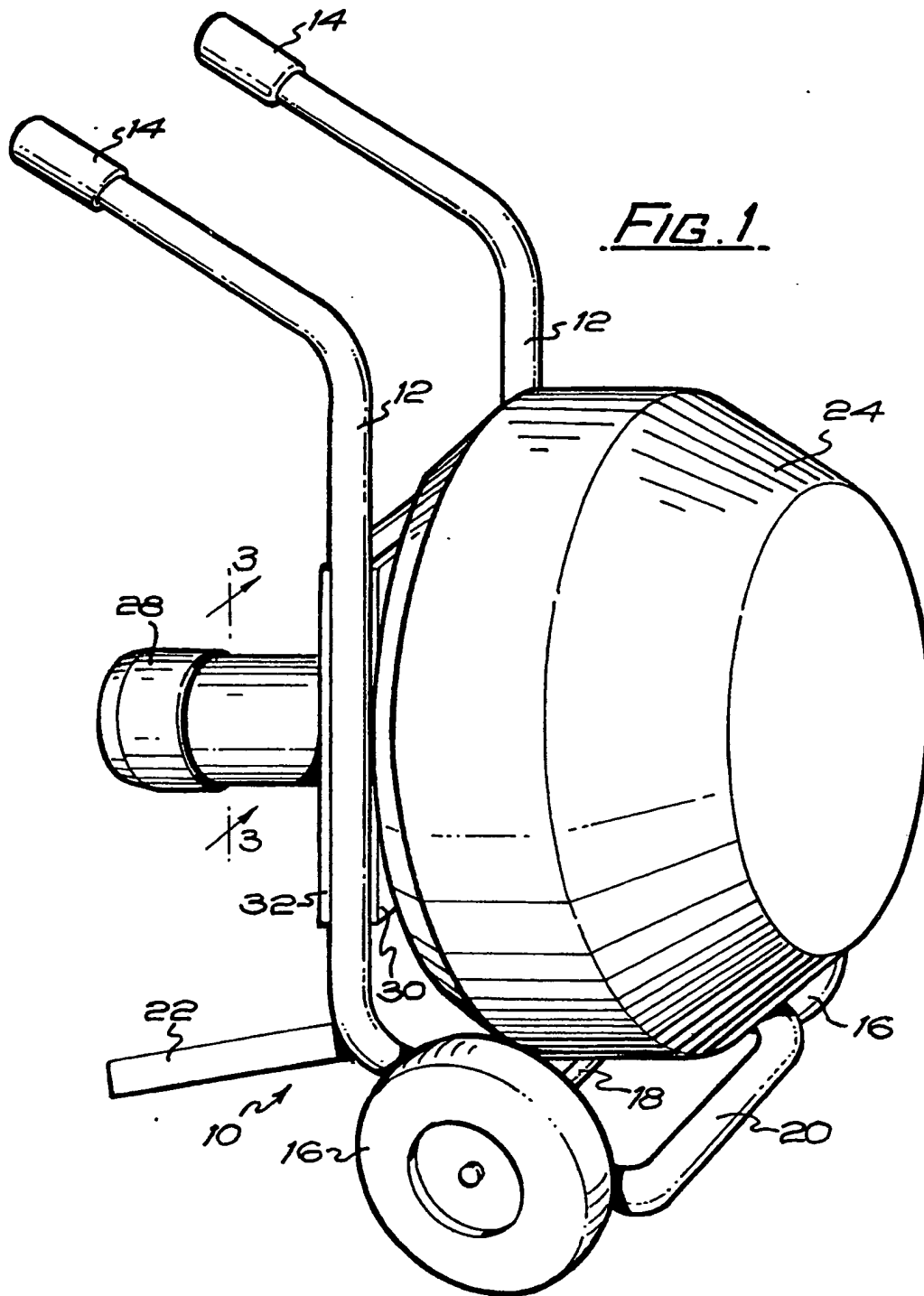
(57) A cement mixer has an upstanding wheeled frame (10), a mixing vessel (24) projecting forwardly of the frame, and an electric motor (28) drivably connected to the mixing vessel by way of reduction gearing.

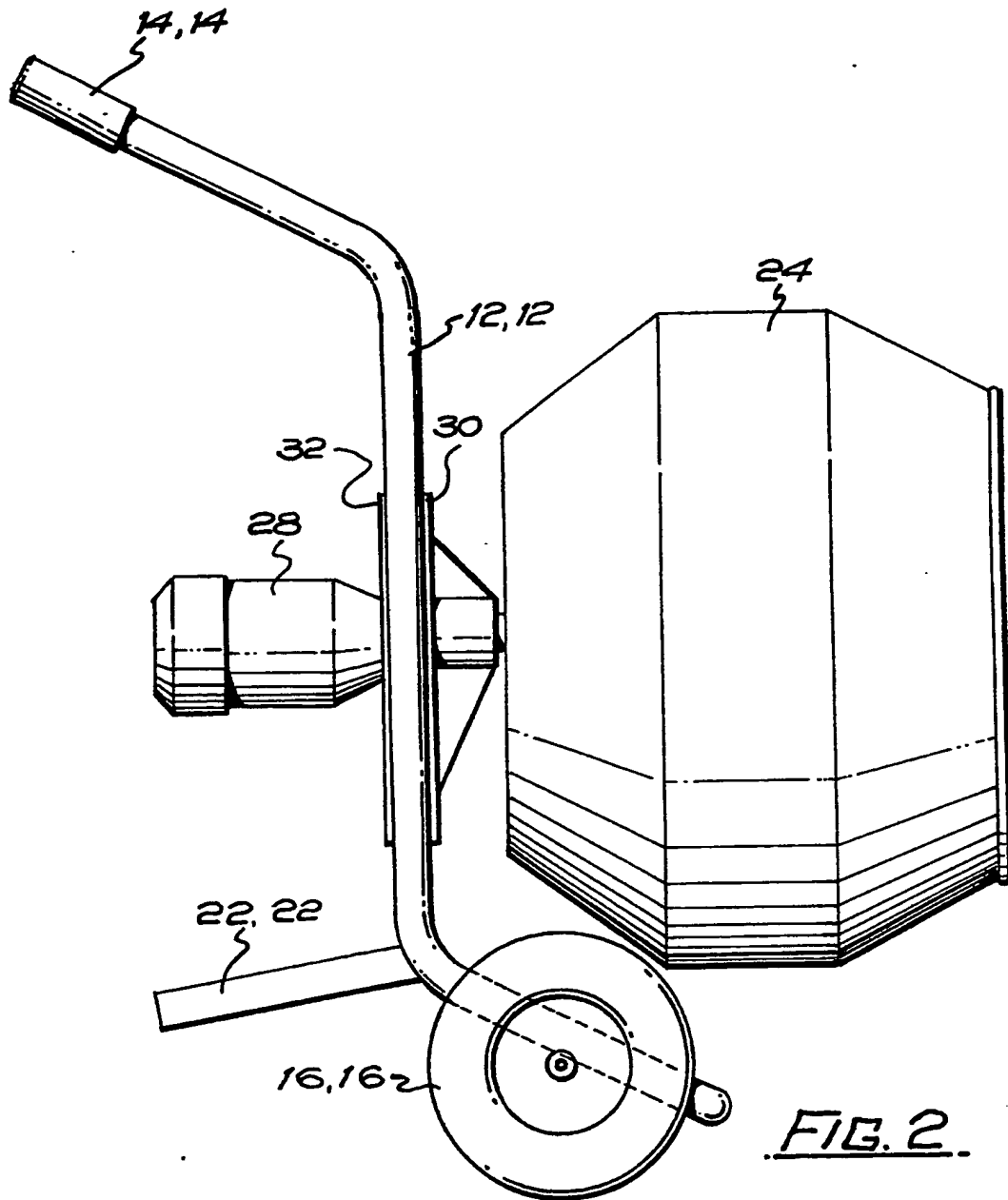
So that the mixer can be produced at an economical cost, the reduction gearing is located within a space formed between respective front and back plates (30 and 32) bolted to the tubular side frame members (12).



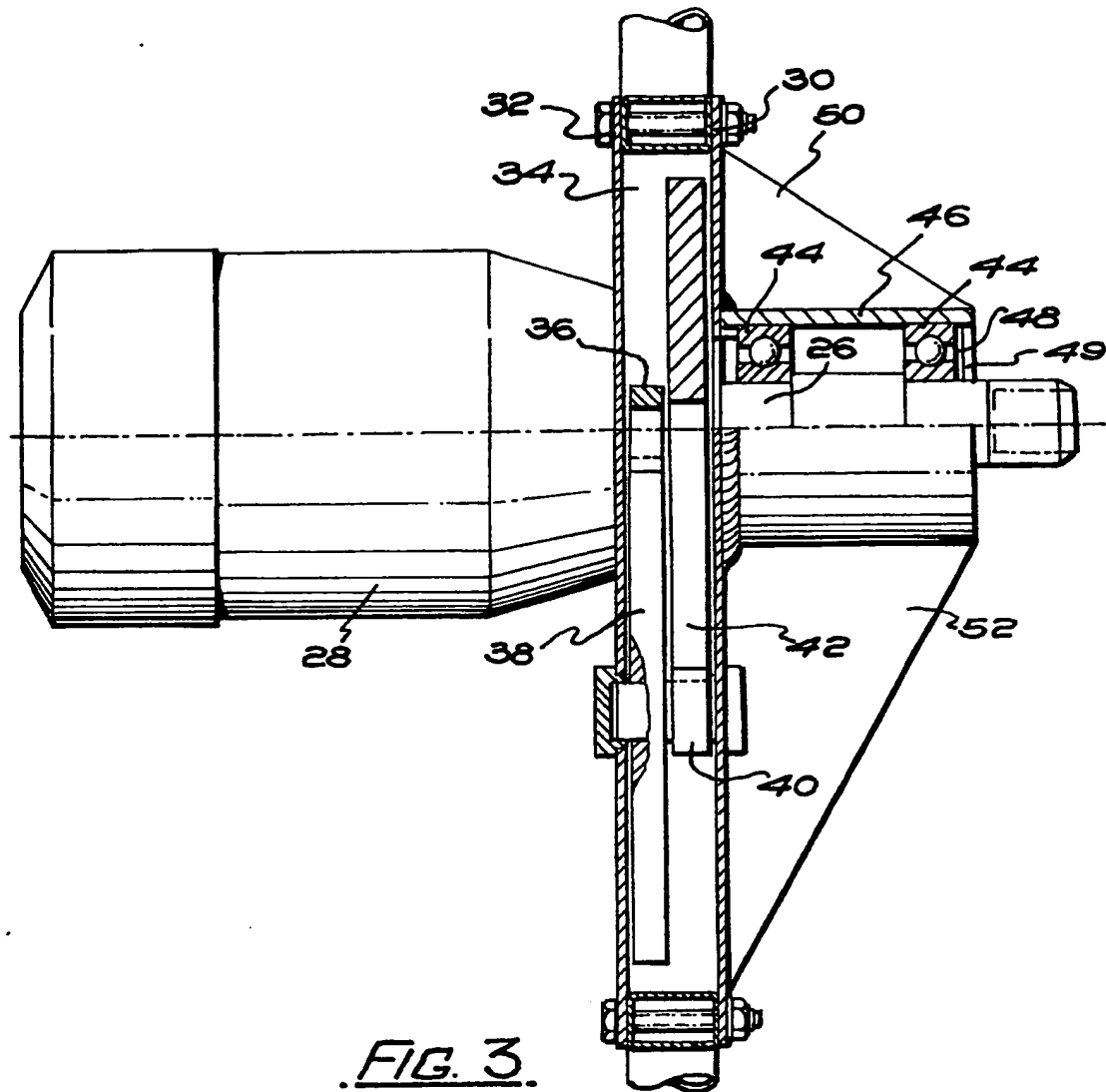
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1-3





3-3



Cement mixer.

The invention relates to a cement mixer.

Cement mixers of relatively small size and intended mainly for the use of householders for example are already known and generally include a  
5 wheeled frame, with handles by means of which it can be trundled around in the manner of a wheelbarrow, the frame carrying a rotatable mixing vessel and an electric motor for rotating the  
10 mixing vessel by way of a reduction gearbox. Such cement mixers work quite well but are somewhat expensive. The object of the invention is to provide a cement mixer of the same general kind but of a construction such that it can be produced at a  
15 lesser cost.

According to the invention, there is provided a cement mixer having an upstanding wheeled frame including upstanding tubular side frame members terminating in handles by means of which it can be  
20 trundled around, a mixing vessel projecting forwardly of the frame and rotatable about the axis of a forwardly extending mounting shaft rotatably mounted in said frame, and an electric motor extending rearwardly from the frame and drivably  
25 connected by way of reduction gearing to the mixing

vessel mounting shaft, the reduction gearing being located within the thickness of the tubular frame. The reduction gearing will preferably be located within a space formed between respective front and back plates bolted to the frame.

In order that the invention may be fully understood and readily carried into effect, the same will now be described, by way of example only, with reference to the accompanying drawings, of which:-

Figure 1 is a perspective view of a cement mixer embodying the invention,

Figure 2 is a side view, and

Figure 3 is a sectional view on the line 3-3 in Figure 1.

Referring now to the drawings, the cement mixer there illustrated has an upstanding wheeled frame generally indicated 10, the frame including upstanding tubular side frame members 12,12 which are angled at their upper ends, as shown, to terminate in handles 14,14 by means of which the mixer can be trundled around. As best seen in Figure 1, the upstanding side frame members have been formed from one continuous length of steel tube which has been formed in a U-shape before the upper ends of the side frame members have been

angled in on direction and a lower part of th  
frame has been angled in the opposite direction.  
The wheels, 16,16 of the frame are mounted on the  
opposite ends of an axle 18 which has been welded  
5 across the underside of the frame, a short distance  
back from the length of tube which forms the cross  
piece 20 of the U-shape of the frame. A pair of  
legs 22 are welded to the lower ends of the side  
frame members, as shown, to extend rearwardly and  
10 downwardly. They are intended to prevent the mixer  
from falling over rearwardly.

A mixing vessel 24 projects forwardly of the  
frame and is rotatable about the axis of a  
forwardly extending mounting shaft 26 on which it  
15 is fixed. The shaft 26 is rotatably mounted in the  
frame as will presently be described. An electric  
motor 28 extends rearwardly from the frame and is  
drivably connected by way of reduction gearing to  
the mixing vessel mounting shaft.

20 Referring now in particular to Figure 3, this  
illustrates the way in which the shaft 26 and the  
reduction gearing referred to is rotatably mounted  
in the frame. As shown, respective front and back  
plates 30 and 32 have been bolted to the frame to  
25 form a space 34 equal in width to the outside  
diameter of the steel tube from which the frame has

been formed. The reduction gearing referred to is contained within the space 34 and comprises a pinion 36 which is fixed on the motor drive shaft, an idler gear 38 fixed to an idler pinion 40, both of which are mounted for free rotation about a common axis, and a drive gear 42 which meshes with the idler pinion and which is fixed on the inner end of shaft 26.

The shaft 26 is mounted in ball bearings 44, 44 spaced apart within a cylindrical housing 46 which has been welded to the front plate 30, the bearings being retained in the housing and the shaft 26 being axially located by the fitment of a circlip 48. A seal 49 excludes the entry of dirt and grit into the bearing arrangement. Great strength has been built into the mounting by the welding of an arrangement of webs 50 and 52 around the housing 46.

Thus there is provided a cement mixer of relatively small size intended mainly for the use of householders, for example, when performing DIY jobs, the mixer being of such a simple construction that it can be produced at a very modest cost. The fact that the reduction gearing is mounted as described instead of being a separate unit bolted onto the frame contributes to the reduction in cost



and results in a construction of  $n$  at and simple appearance.

CLAIMS:

1. A cement mixer having an upstanding wheeled frame including upstanding tubular side frame members terminating in handles by means of which it  
5 can be trundled around, a mixing vessel projecting forwardly of the frame and rotatable about the axis of a forwardly extending mounting shaft rotatably mounted in said frame, and an electric motor extending rearwardly from the frame and drivably  
10 connected by way of reduction gearing to the mixing vessel mounting shaft, the reduction gearing being located within the thickness of the tubular frame.
2. A cement mixer according to claim 1, in which the reduction gearing is located within a  
15 space formed between respective front and back plates bolted to the frame.
3. A cement mixer constructed, arranged and adapted to operate substantially as hereinbefore described with reference to and as illustrated by  
20 the accompanying drawings.